FIG. 1

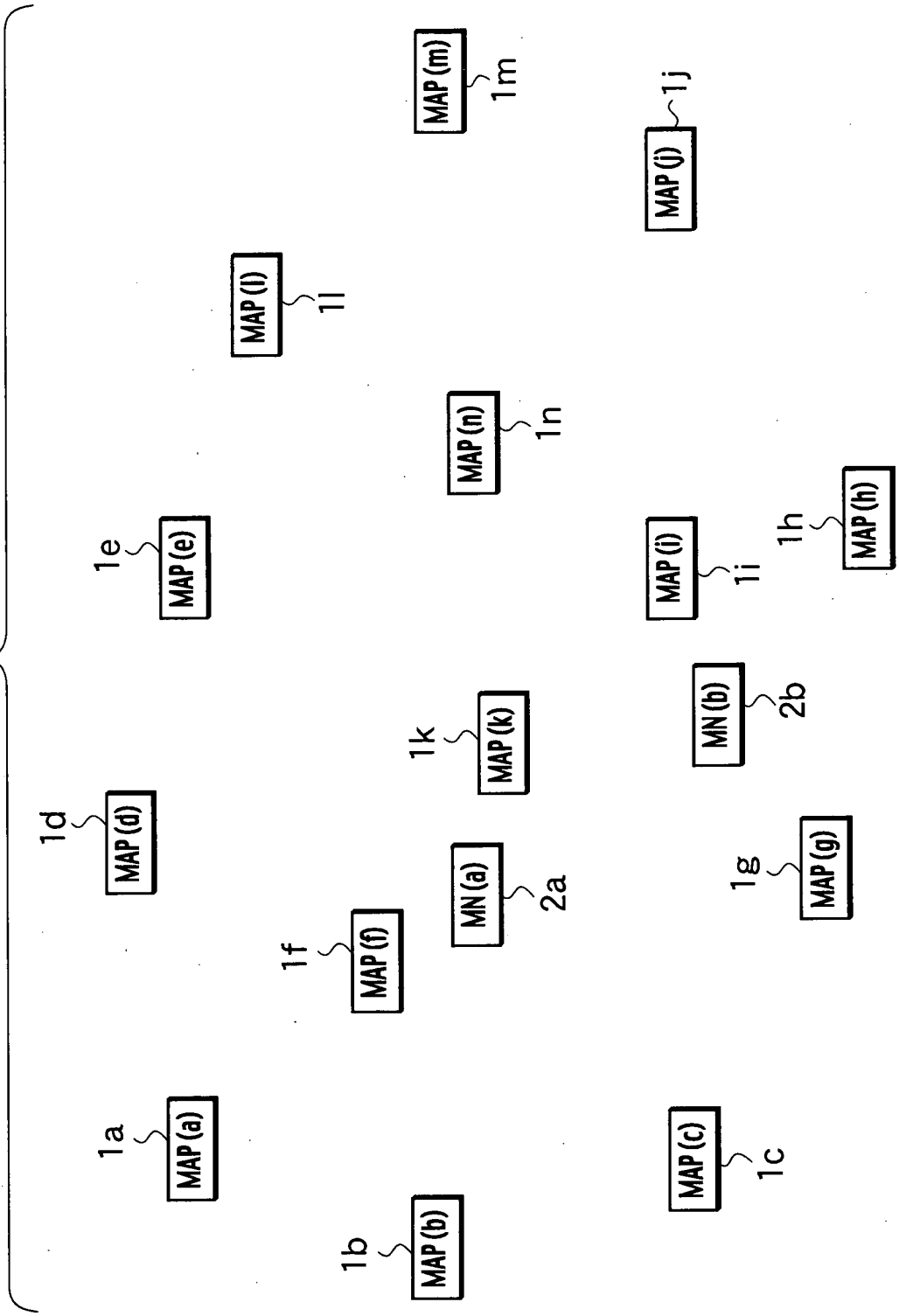

MAP (a)
1a
MAP (b)
1b
MAP (c)
1c
MAP (d)
1d
MAP (e)
1e
MAP (f)
1f
MAP (g)
1g
MAP (h)
1h
MAP (i)
1i
MAP (j)
1j
MAP (k)
1k
MAP (l)
1l
MAP (m)
1m
MAP (n)
1n
MN (a)
2a
MN (b)
2b

FIG. 2

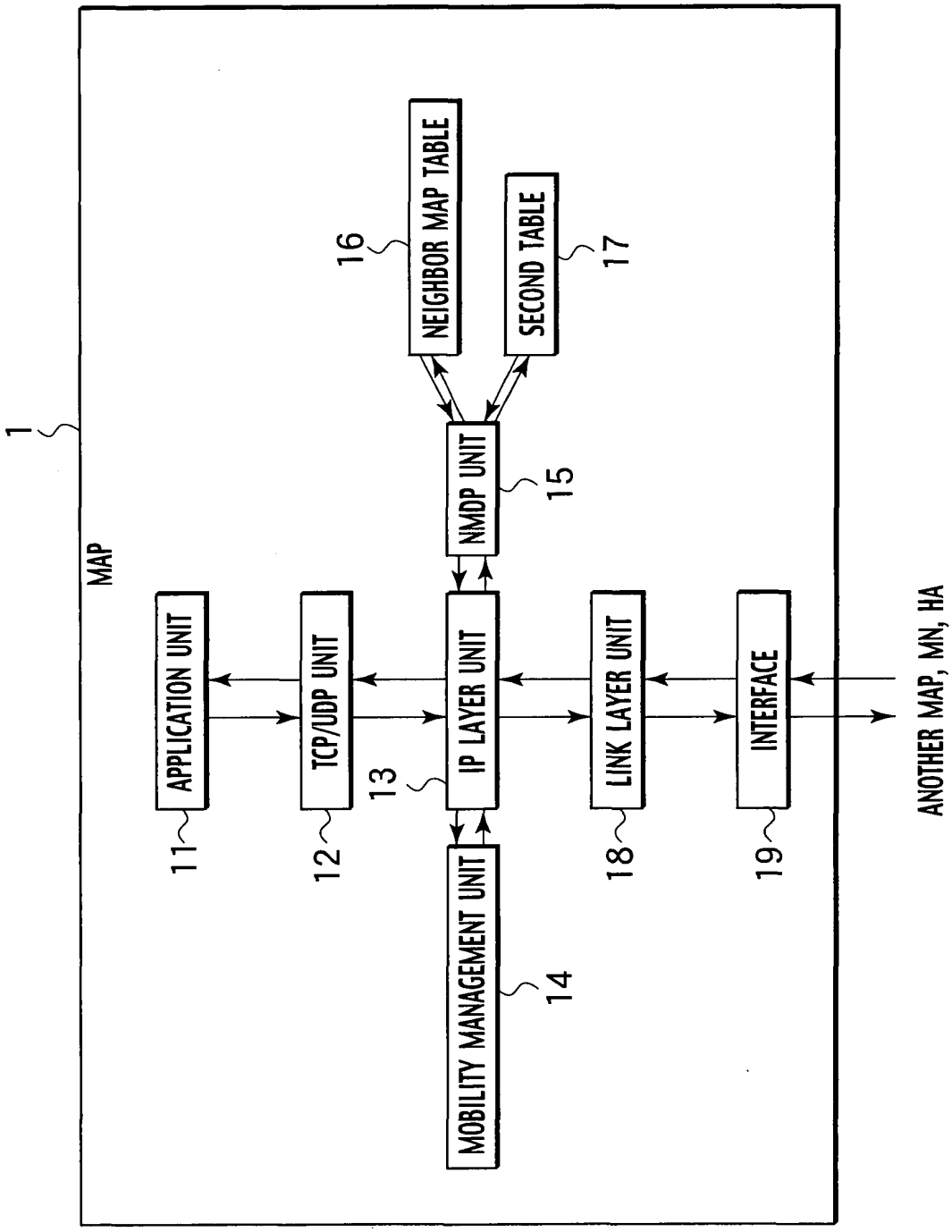

1
MAP
NEIGHBOR MAP TABLE
16
SECOND TABLE
17
NMDP UNIT
15
APPLICATION UNIT
11
TCP/UDP UNIT
12
IP LAYER UNIT
13
LINK LAYER UNIT
18
INTERFACE
19
MOBILITY MANAGEMENT UNIT
14
ANOTHER MAP, MN, HA

FIG. 3

MAP (k)

NEIGHBOR MAP TABLE 16k

IP ADDRESS	DELAY VALUE (msec.)	PROCESSING CAPABILITY	LIFETIME (sec.)	SEQUENCE NUMBER 1	FORCED REGISTRATION LIFETIME (sec.)	SEQUENCE NUMBER 2
k	0	10 (MEDIUM)	635	1653	0	
f	6.5	11 (LOW)	433	1652	2944	623
i	6.8	01 (HIGH)	122	1650	0	
n	7.3	10 (MEDIUM)	61	1649	0	
g	13.0	00 (HIGHEST)	122	1650	0	

SECOND TABLE 17k

SEQUENCE NUMBER 3	1653
INITIAL LIFETIME (sec.)	900
SEARCH LIFETIME (sec.)	60
SEQUENCE NUMBER 4	2232
FORCED REGISTRATION INITIAL LIFETIME (sec.)	1800
FORCED REGISTRATION REQUEST TRANSMISSION TIMER (sec.)	1163
PROCESSING CAPABILITY	10 (MEDIUM)
TIMER (sec.)	111.5265
SMOOTHING FACTOR α	0.5

FIG. 4

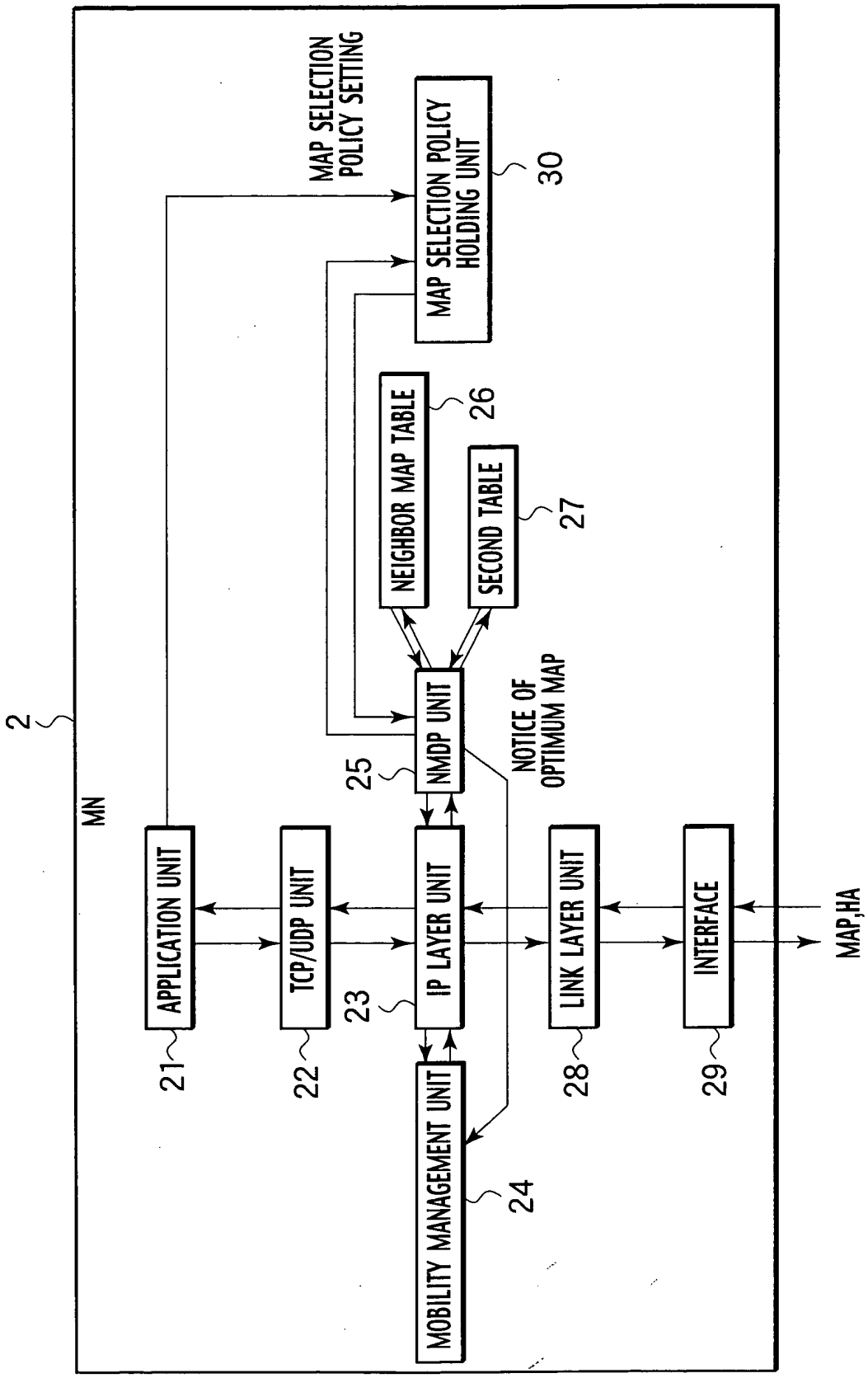

2
MN
MAP SELECTION POLICY SETTING
MAP SELECTION POLICY HOLDING UNIT
30
NEIGHBOR MAP TABLE
26
SECOND TABLE
27
NOTICE OF OPTIMUM MAP
NMDP UNIT
25
APPLICATION UNIT
TCP/UDP UNIT
IP LAYER UNIT
23
LINK LAYER UNIT
INTERFACE
MAP,HA
21
22
28
29
MOBILITY MANAGEMENT UNIT
24

FIG. 5

MN (a)

NEIGHBOR MAP TABLE 26a

IP ADDRESS	DELAY VALUE (msec.)	PROCESSING CAPABILITY	LIFETIME (sec.)	SEQUENCE NUMBER 1
f	2.3	10 (MEDIUM)	22	666
k	3.3	10 (MEDIUM)	22	666
b	4.1	01 (HIGH)	30	667
a	5.9	00 (HIGHEST)	18	663
d	9.9	11 (LOW)	18	663

SECOND TABLE 27a

SEQUENCE NUMBER 3	667
INITIAL LIFETIME (sec.)	30
SEARCH LIFETIME (sec.)	15
TIMER (sec.)	52.0121
SMOOTHING FACTOR β.	0

FIG. 6

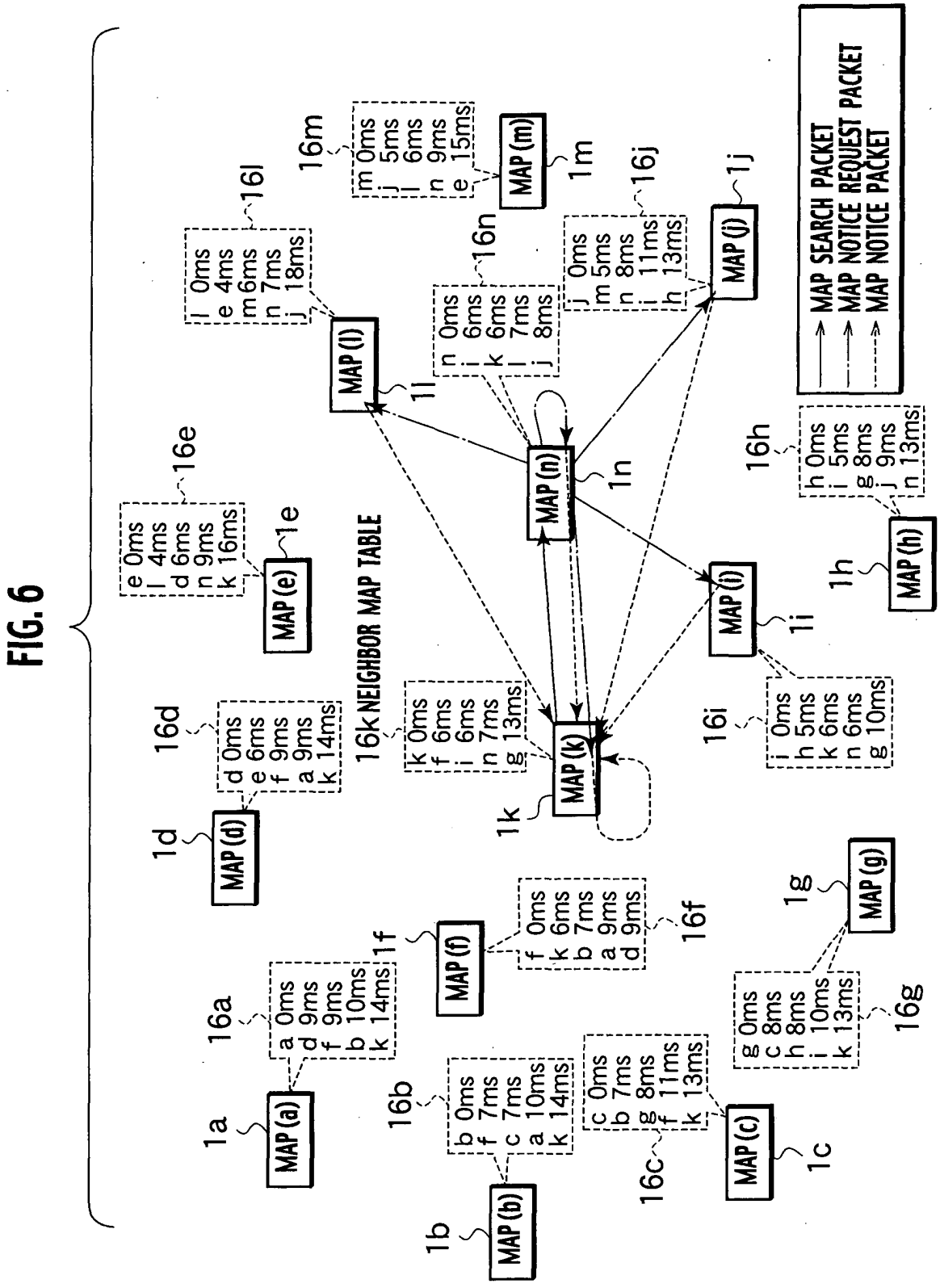

MAP SEARCH PACKET
MAP NOTICE REQUEST PACKET
MAP NOTICE PACKET
16K NEIGHBOR MAP TABLE
MAP(a)
MAP(b)
MAP(c)
MAP(d)
MAP(e)
MAP(f)
MAP(g)
MAP(h)
MAP(i)
MAP(j)
MAP(k)
MAP(l)
MAP(m)
MAP(n)
1a
1b
1c
1d
1e
1f
1g
1h
1i
1j
1k
1l
1m
1n
16a
16b
16c
16d
16e
16f
16g
16h
16i
16j
16k
16l
16m
16n

FIG. 7

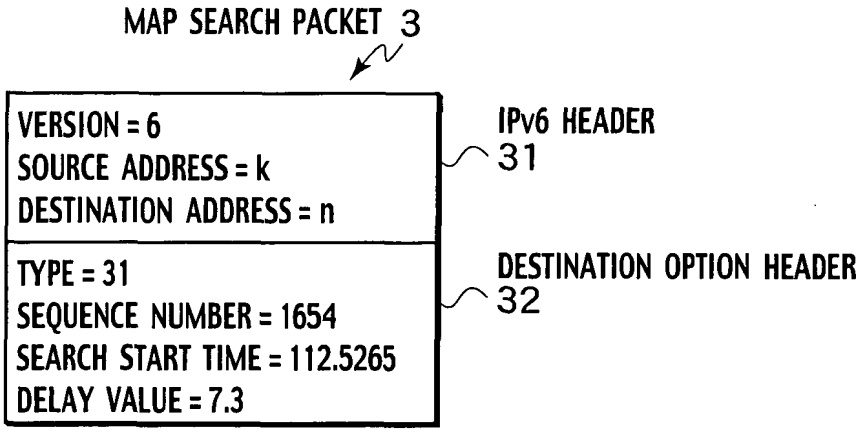


FIG. 8A

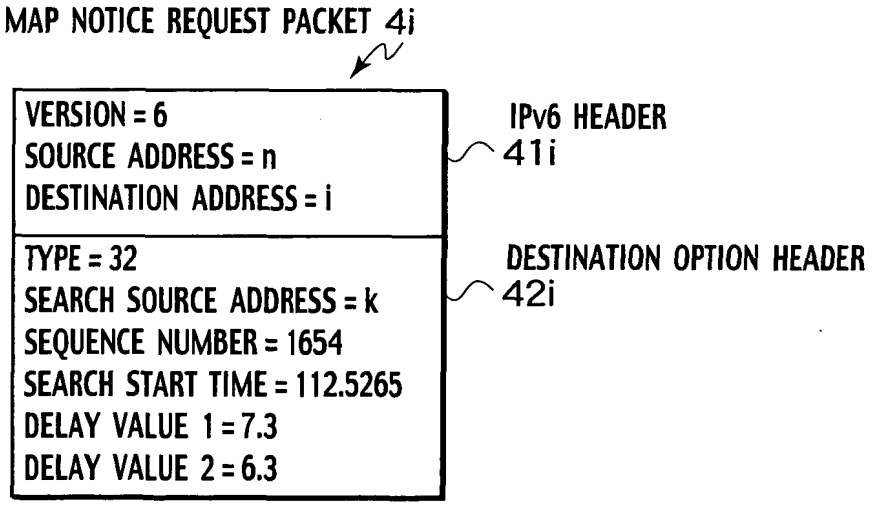


FIG. 8B

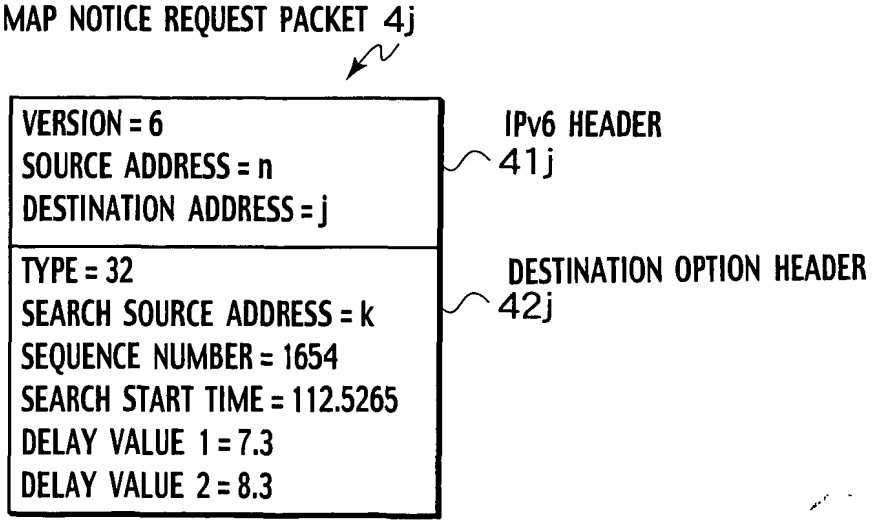


FIG. 9A

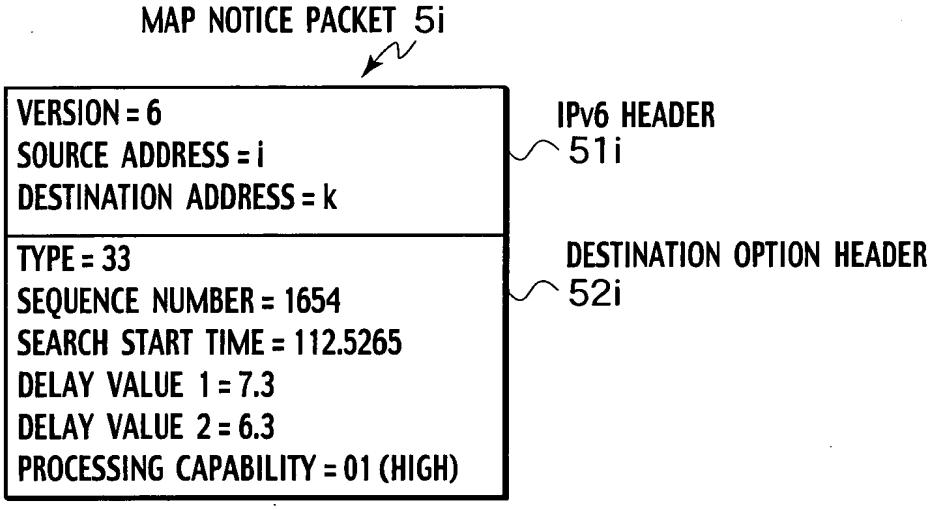

MAP NOTICE PACKET 5i
VERSION = 6
SOURCE ADDRESS = i
DESTINATION ADDRESS = k
IPv6 HEADER
51i
TYPE = 33
SEQUENCE NUMBER = 1654
SEARCH START TIME = 112.5265
DELAY VALUE 1 = 7.3
DELAY VALUE 2 = 6.3
PROCESSING CAPABILITY = 01 (HIGH)
DESTINATION OPTION HEADER
52i

FIG. 9B

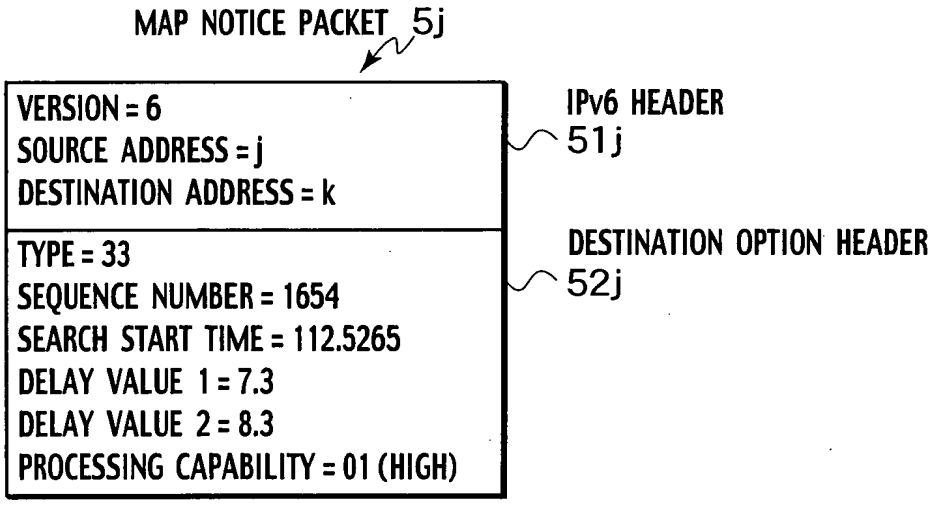

MAP NOTICE PACKET 5j
VERSION = 6
SOURCE ADDRESS = j
DESTINATION ADDRESS = k
IPv6 HEADER
51j
TYPE = 33
SEQUENCE NUMBER = 1654
SEARCH START TIME = 112.5265
DELAY VALUE 1 = 7.3
DELAY VALUE 2 = 8.3
PROCESSING CAPABILITY = 01 (HIGH)
DESTINATION OPTION HEADER
52j

FIG. 10

MAP (k)

NEIGHBOR MAP TABLE 16k

IP ADDRESS	DELAY VALUE (msec.)	PROCESSING CAPABILITY	LIFETIME (sec.)	SEQUENCE NUMBER 1	FORCED REGISTRATION LIFETIME (sec.)	SEQUENCE NUMBER 2
k	0	10 (MEDIUM)	900	1654	0	
f	6.5	11 (LOW)	432	1652	2943	623
i	6.8	01 (HIGH)	122	1650	0	
n	7.2	11 (LOW)	900	1654	0	
g	13.0	00 (HIGHEST)	121	1650	0	

SECOND TABLE 17k

SEQUENCE NUMBER 3	1654
INITIAL LIFETIME (sec.)	900
SEARCH LIFETIME (sec.)	60
SEQUENCE NUMBER 4	2232
FORCED REGISTRATION INITIAL LIFETIME (sec.)	1800
FORCED REGISTRATION REQUEST TRANSMISSION TIMER (sec.)	1162
PROCESSING CAPABILITY	10 (MEDIUM)
TIMER (sec.)	112.5465
SMOOTHING FACTOR α	0.5

FIG. 11

MAP (k)

NEIGHBOR MAP TABLE 16k

IP ADDRESS	DELAY VALUE (msec.)	PROCESSING CAPABILITY	LIFETIME (sec.)	SEQUENCE NUMBER 1	FORCED REGISTRATION LIFETIME (sec.)	SEQUENCE NUMBER 2
k	0	10 (MEDIUM)	900	1654	0	
f	6.5	11 (LOW)	432	1652	2943	623
i	6.6	01 (HIGH)	900	1654	0	
n	7.2	11 (LOW)	900	1654	0	
g	13.0	00 (HIGHEST)	121	1650	0	

SECOND TABLE 17k

SEQUENCE NUMBER 3	1654
INITIAL LIFETIME (sec.)	900
SEARCH LIFETIME (sec.)	60
SEQUENCE NUMBER 4	2232
FORCED REGISTRATION INITIAL LIFETIME (sec.)	1800
FORCED REGISTRATION REQUEST TRANSMISSION TIMER (sec.)	1162
PROCESSING CAPABILITY	10 (MEDIUM)
TIMER (sec.)	112.5554
SMOOTHING FACTOR α	0.5

FIG. 12

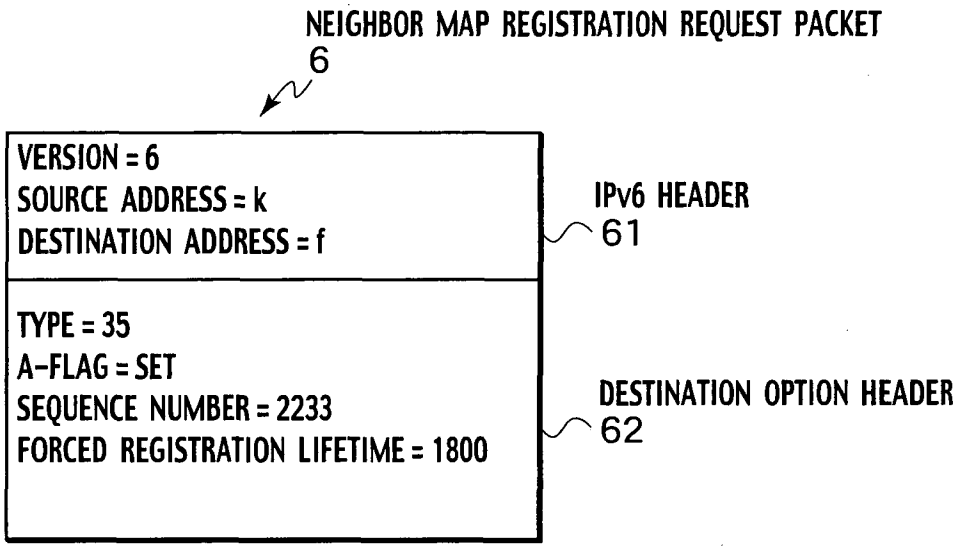

NEIGHBOR MAP REGISTRATION REQUEST PACKET
6
VERSION = 6
SOURCE ADDRESS = k
DESTINATION ADDRESS = f
IPv6 HEADER
61
TYPE = 35
A-FLAG = SET
SEQUENCE NUMBER = 2233
FORCED REGISTRATION LIFETIME = 1800
DESTINATION OPTION HEADER
62

FIG. 13

MAP (f)

NEIGHBOR MAP TABLE 16f

IP ADDRESS	DELAY VALUE (msec.)	PROCESSING CAPABILITY	LIFETIME (sec.)	SEQUENCE NUMBER 1	FORCED REGISTRATION LIFETIME (sec.)	SEQUENCE NUMBER 2
f	0	10 (MEDIUM)	899	22333	0	
k	6.0	10 (MEDIUM)	150	22330	1800	2233
b	7.6	01 (HIGH)	226	22328	0	
a	9.2	00 (HIGHEST)	900	22333	0	
d	9.4	11 (LOW)	900	22333	0	

SECOND TABLE 17f

SEQUENCE NUMBER 3	22333
INITIAL LIFETIME (sec.)	900
SEARCH LIFETIME (sec.)	60
SEQUENCE NUMBER 4	623
FORCED REGISTRATION INITIAL LIFETIME (sec.)	3600
FORCED REGISTRATION REQUEST TRANSMISSION TIMER (sec.)	3000
PROCESSING CAPABILITY	11 (LOW)
TIMER (sec.)	52.0121
SMOOTHING FACTOR α	0.5

FIG. 14

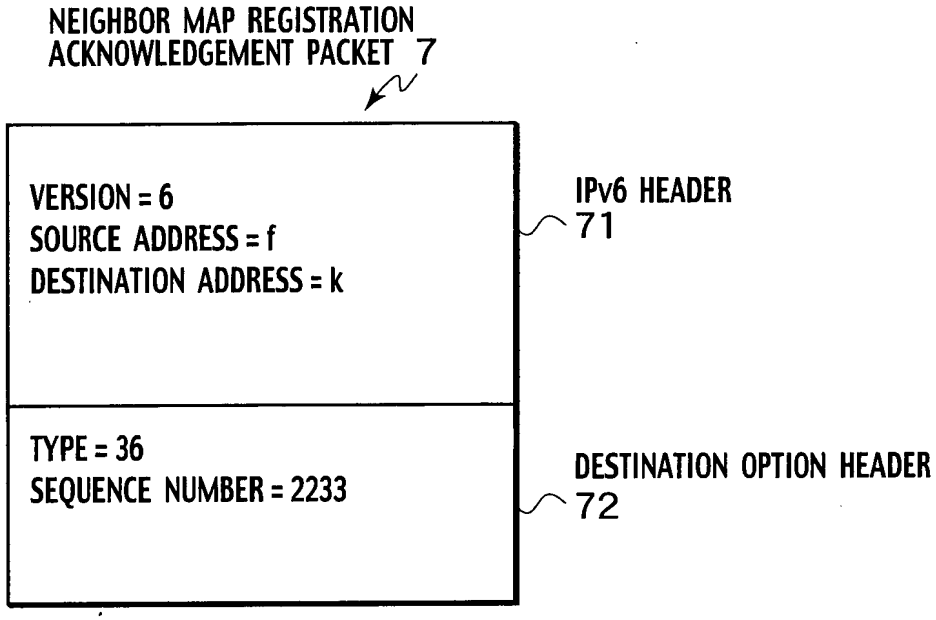

NEIGHBOR MAP REGISTRATION
ACKNOWLEDGEMENT PACKET 7
VERSION = 6
SOURCE ADDRESS = f
DESTINATION ADDRESS = k
IPv6 HEADER
71
TYPE = 36
SEQUENCE NUMBER = 2233
DESTINATION OPTION HEADER
72

FIG. 15

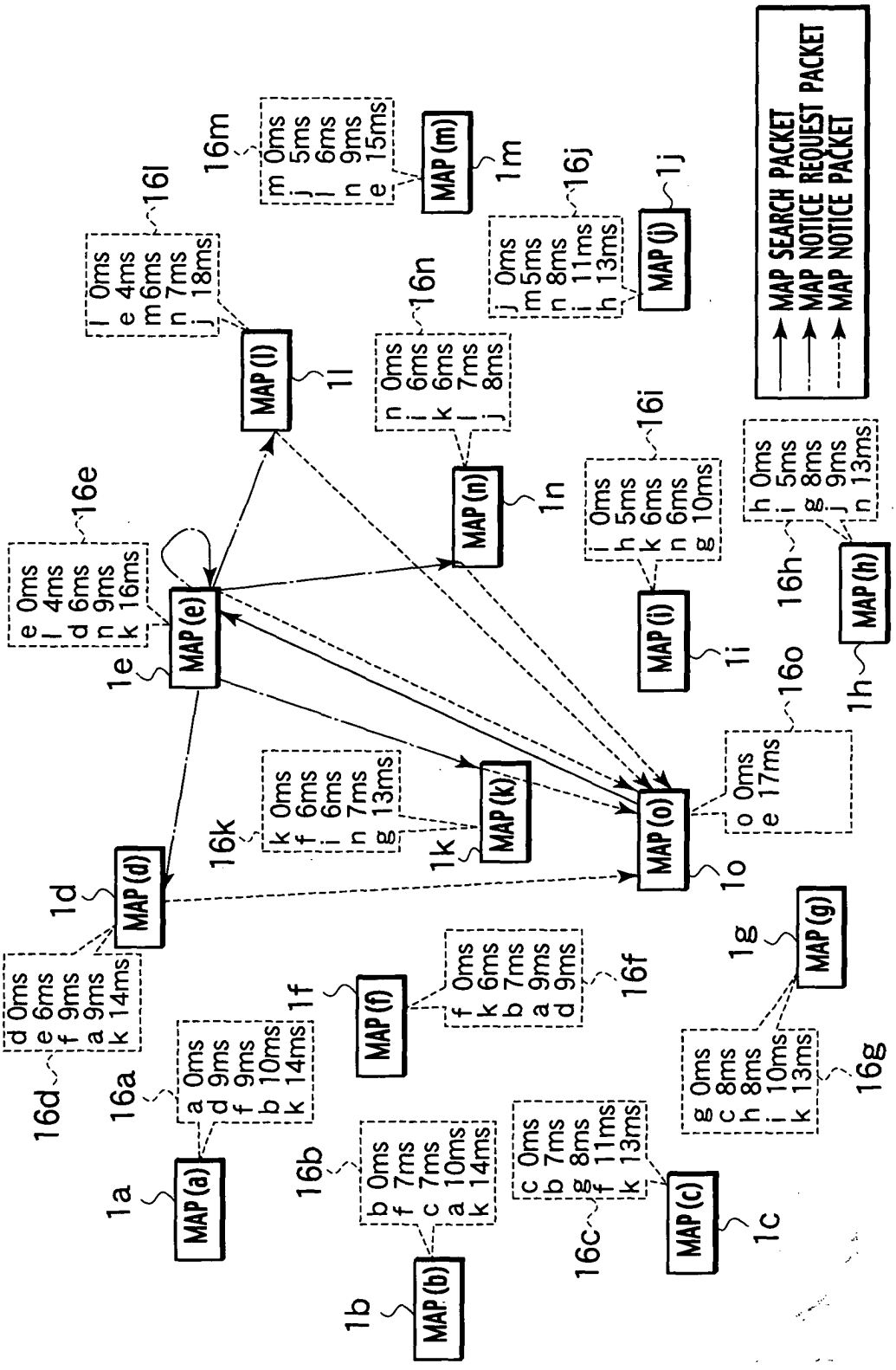

MAP SEARCH PACKET
MAP NOTICE REQUEST PACKET
MAP NOTICE PACKET
MAP(a)
MAP(b)
MAP(c)
MAP(d)
MAP(e)
MAP(f)
MAP(g)
MAP(h)
MAP(i)
MAP(j)
MAP(k)
MAP(l)
MAP(m)
MAP(n)
MAP(o)
1a
1b
1c
1d
1e
1f
1g
1h
1i
1j
1k
1l
1m
1n
1o
16a
16b
16c
16d
16e
16f
16g
16h
16i
16j
16k
16l
16m
16n
16o
a 0ms d 9ms f 9ms b 10ms k 14ms
b 0ms f 7ms c 7ms a 10ms k 14ms
c 0ms b 7ms g 8ms f 11ms k 13ms
d 0ms e 6ms f 9ms a 9ms k 14ms
e 0ms l 4ms d 6ms n 9ms k 16ms
f 0ms k 6ms b 7ms a 9ms d 9ms
g 0ms c 8ms h 8ms i 10ms k 13ms
h 0ms i 5ms g 8ms j 9ms n 13ms
i 0ms h 5ms k 6ms n 6ms g 10ms
j 0ms m 5ms n 8ms i 11ms h 13ms
k 0ms f 6ms i 6ms n 7ms g 13ms
l 0ms e 4ms m 6ms n 7ms j 18ms
m 0ms j 5ms l 6ms n 9ms e 15ms
n 0ms i 6ms k 6ms l 7ms j 8ms
o 0ms e 17ms

FIG. 16

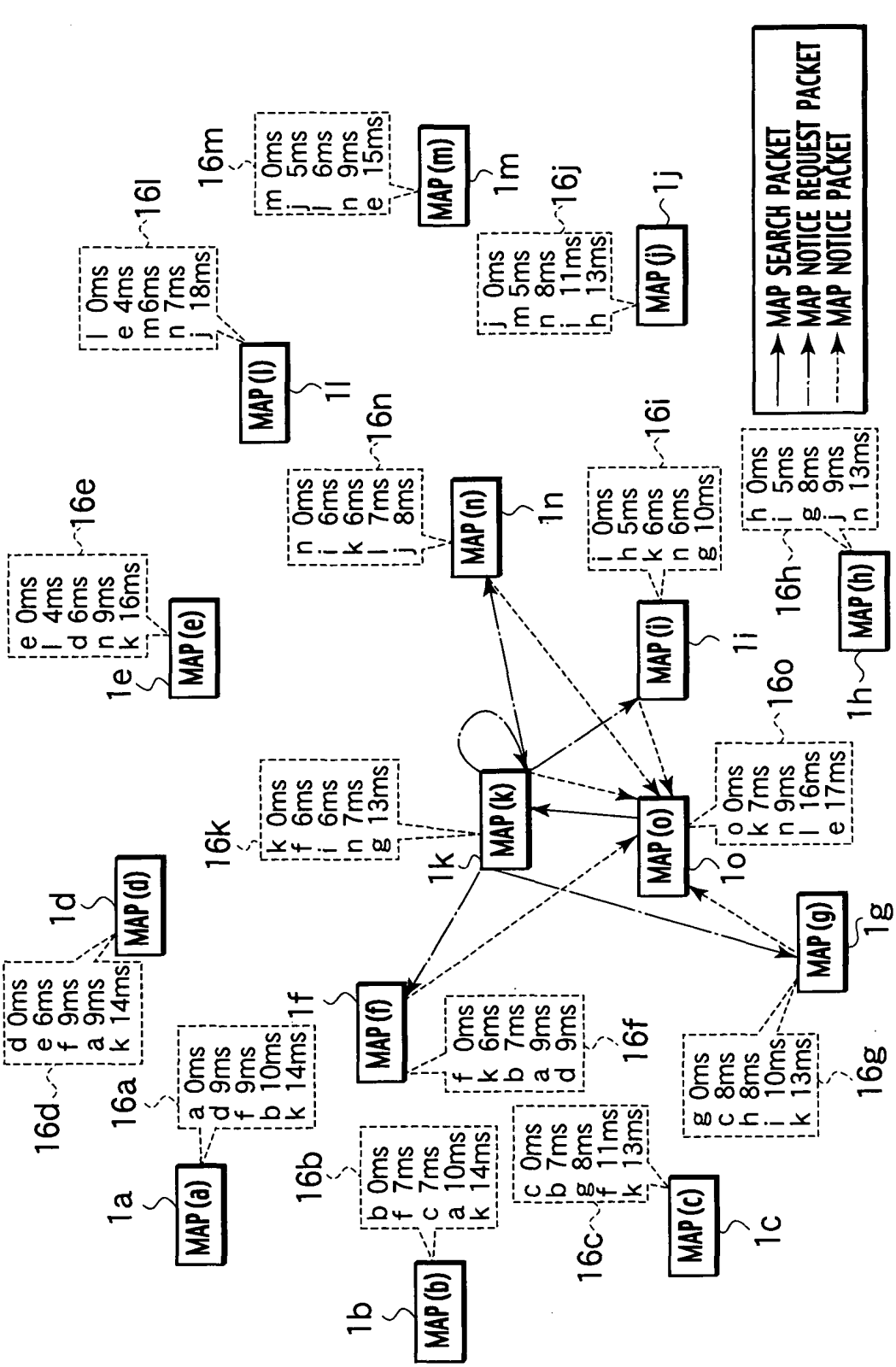

MAP SEARCH PACKET
MAP NOTICE REQUEST PACKET
MAP NOTICE PACKET
MAP(a)
MAP(b)
MAP(c)
MAP(d)
MAP(e)
MAP(f)
MAP(g)
MAP(h)
MAP(i)
MAP(j)
MAP(k)
MAP(l)
MAP(m)
MAP(n)
MAP(o)
1a
1b
1c
1d
1e
1f
1g
1h
1i
1j
1k
1l
1m
1n
1o
16a
16b
16c
16d
16e
16f
16g
16h
16i
16k
16l
16m
16n
16o
a 0ms d 9ms f 9ms b 10ms k 14ms
b 0ms f 7ms c 7ms a 10ms k 14ms
c 0ms b 7ms g 8ms f 11ms k 13ms
d 0ms e 6ms f 9ms a 9ms k 14ms
e 0ms l 4ms d 6ms n 9ms k 16ms
f 0ms k 6ms b 7ms a 9ms d 9ms
g 0ms c 8ms h 8ms i 10ms k 13ms
h 0ms i 5ms g 8ms j 9ms n 13ms
i 0ms h 5ms k 6ms n 6ms g 10ms
j 0ms m 5ms n 8ms i 11ms h 13ms
k 0ms f 6ms i 6ms n 7ms g 13ms
l 0ms e 4ms m 6ms n 7ms j 18ms
m 0ms j 5ms l 6ms n 9ms e 15ms
n 0ms i 6ms k 6ms l 7ms j 8ms
o 0ms k 7ms n 9ms l 16ms e 17ms

FIG. 17

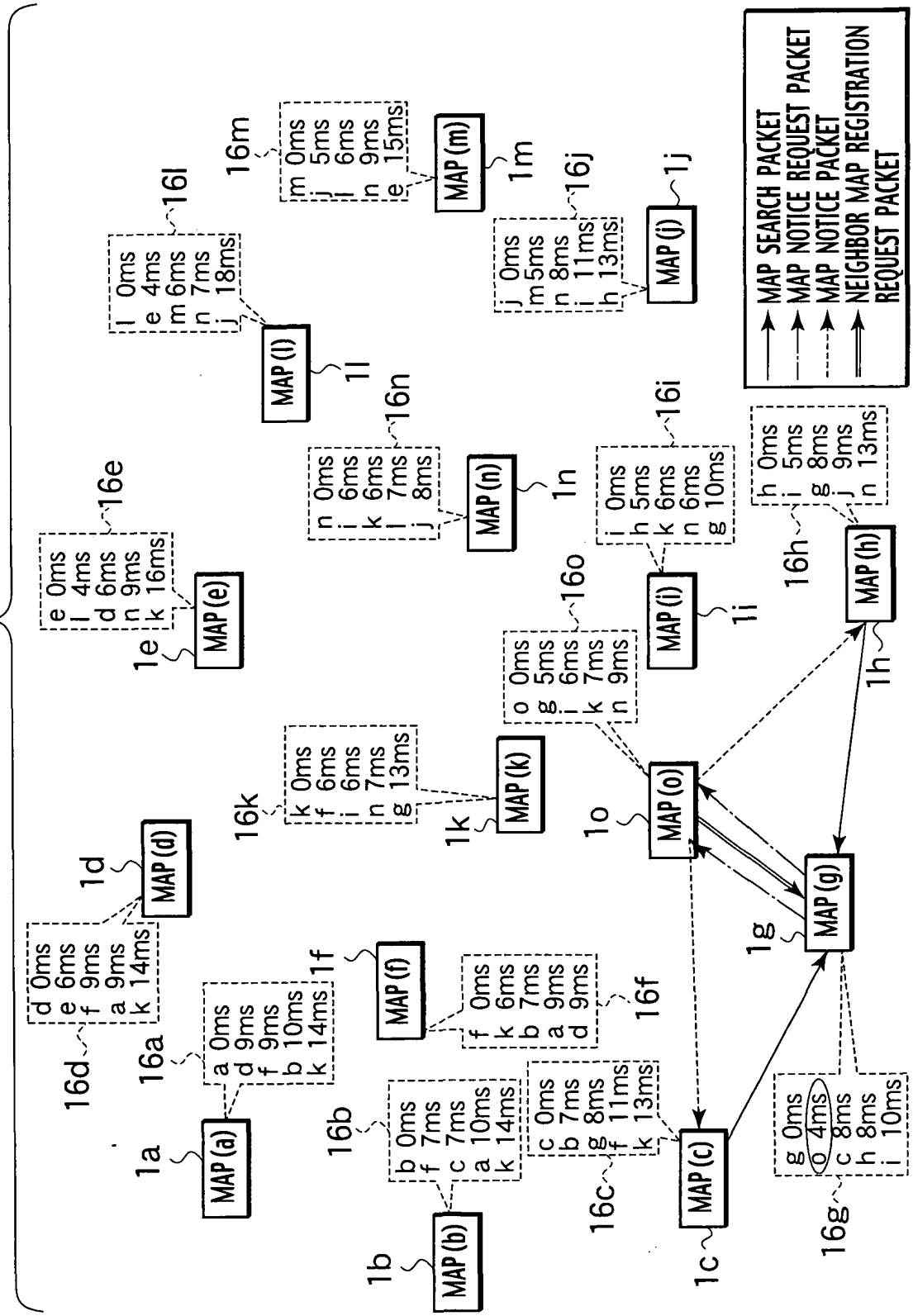

MAP SEARCH PACKET
MAP NOTICE REQUEST PACKET
MAP NOTICE PACKET
NEIGHBOR MAP REGISTRATION REQUEST PACKET
MAP(a)
MAP(b)
MAP(c)
MAP(d)
MAP(e)
MAP(f)
MAP(g)
MAP(h)
MAP(i)
MAP(j)
MAP(k)
MAP(l)
MAP(m)
MAP(n)
MAP(o)
1a
1b
1c
1d
1e
1f
1g
1h
1i
1j
1k
1l
1m
1n
1o
16a
16b
16c
16d
16e
16f
16g
16h
16i
16j
16k
16l
16m
16n
16o

FIG. 18

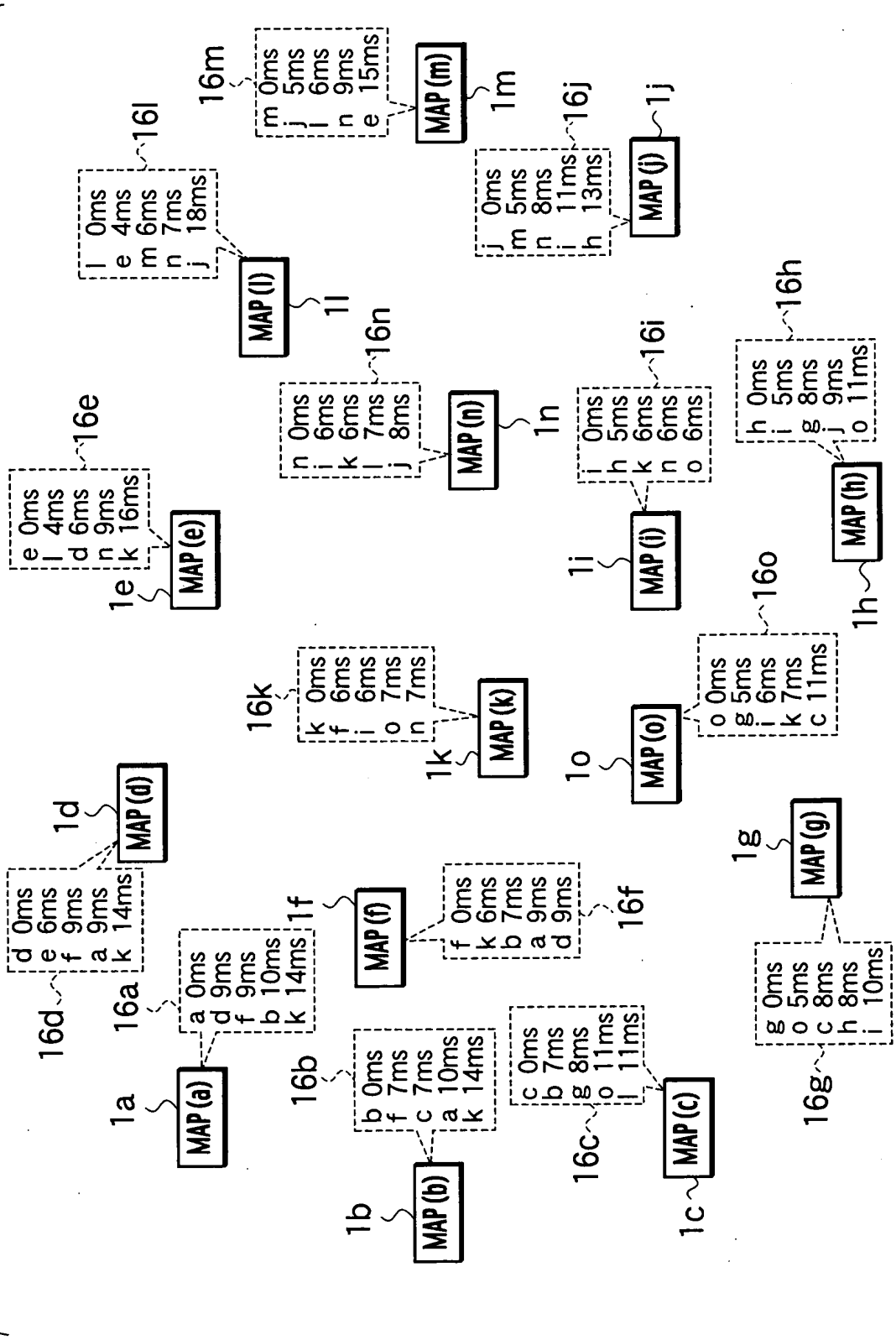

MAP (a)
1a
16a
a 0ms
d 9ms
f 9ms
b 10ms
k 14ms
MAP (b)
1b
16b
b 0ms
f 7ms
c 7ms
a 10ms
k 14ms
MAP (c)
1c
16c
c 0ms
b 7ms
g 8ms
o 11ms
l 11ms
MAP (d)
1d
16d
d 0ms
e 6ms
f 9ms
a 9ms
k 14ms
MAP (e)
1e
16e
e 0ms
l 4ms
d 6ms
n 9ms
k 16ms
MAP (f)
1f
16f
f 0ms
k 6ms
b 7ms
a 9ms
d 9ms
MAP (g)
1g
16g
g 0ms
o 5ms
c 8ms
h 8ms
i 10ms
MAP (h)
1h
16h
h 0ms
i 5ms
g 8ms
j 9ms
o 11ms
MAP (i)
1i
16i
i 0ms
h 5ms
k 6ms
n 6ms
o 6ms
MAP (j)
1j
16j
j 0ms
m 5ms
n 8ms
i 11ms
h 13ms
MAP (k)
1k
16k
k 0ms
f 6ms
i 6ms
o 7ms
n 7ms
MAP (l)
1l
16l
l 0ms
e 4ms
m 6ms
n 7ms
j 18ms
MAP (m)
1m
16m
m 0ms
j 5ms
l 6ms
n 9ms
e 15ms
MAP (n)
1n
16n
n 0ms
i 6ms
k 6ms
l 7ms
j 8ms
MAP (o)
1o
16o
o 0ms
g 5ms
i 6ms
k 7ms
c 11ms

FIG. 19

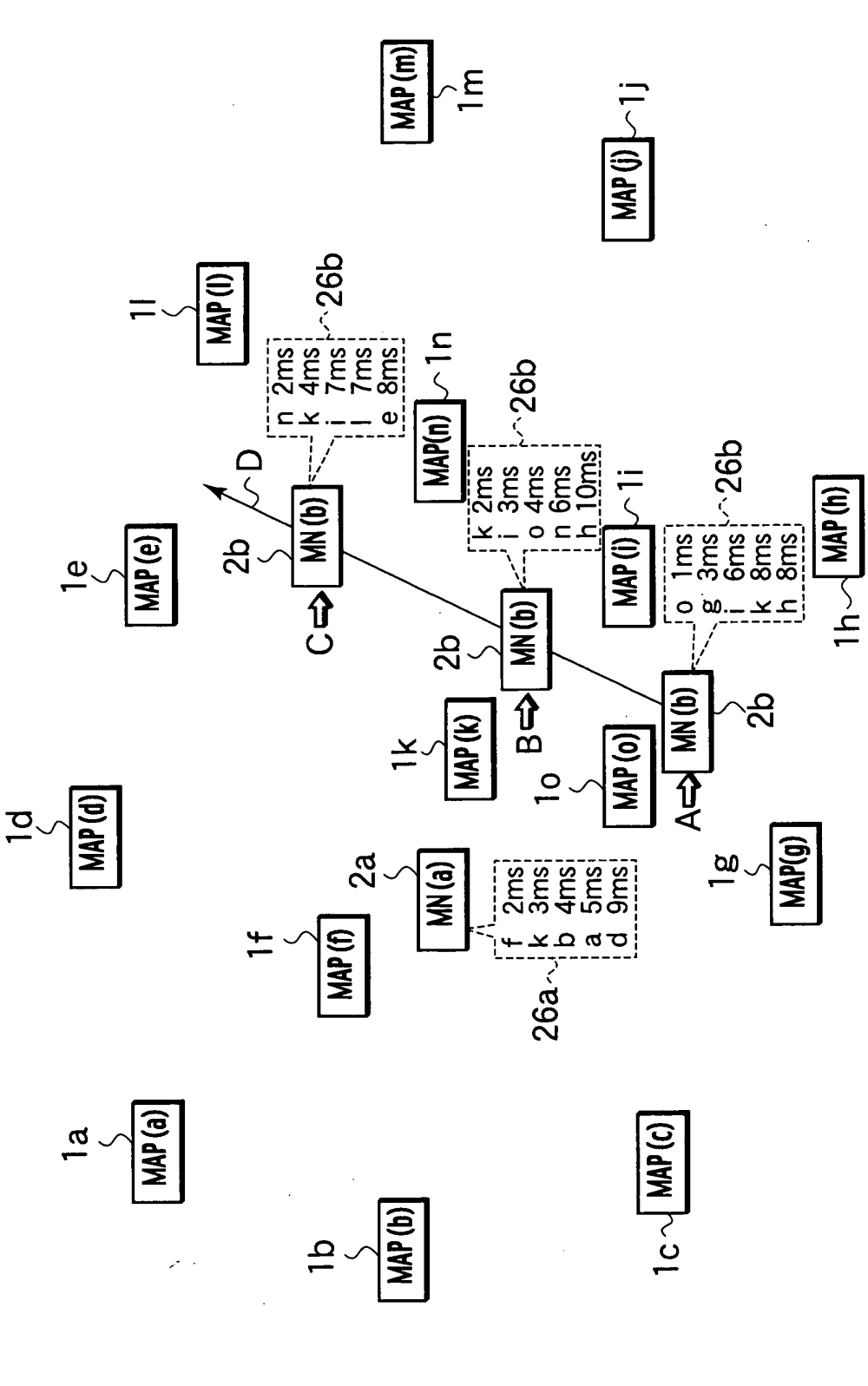

MAP (m)
1m
MAP (j)
1j
1l
MAP (l)
26b
n 2ms
k 4ms
i 7ms
l 7ms
e 8ms
1n
MAP(n)
26b
k 2ms
i 3ms
o 4ms
n 6ms
h 10ms
1i
MAP (i)
26b
o 1ms
g 3ms
i 6ms
k 8ms
h 8ms
MAP (h)
1h
D
2b
MN (b)
C
1e
MAP (e)
2b
MN (b)
B
1k
MAP (k)
1o
MAP (o)
2b
MN (b)
A
1d
MAP (d)
2a
MN (a)
f 2ms
k 3ms
b 4ms
a 5ms
d 9ms
26a
1f
MAP (f)
1g
MAP(g)
1a
MAP (a)
1b
MAP (b)
1c
MAP (c)

FIG. 20

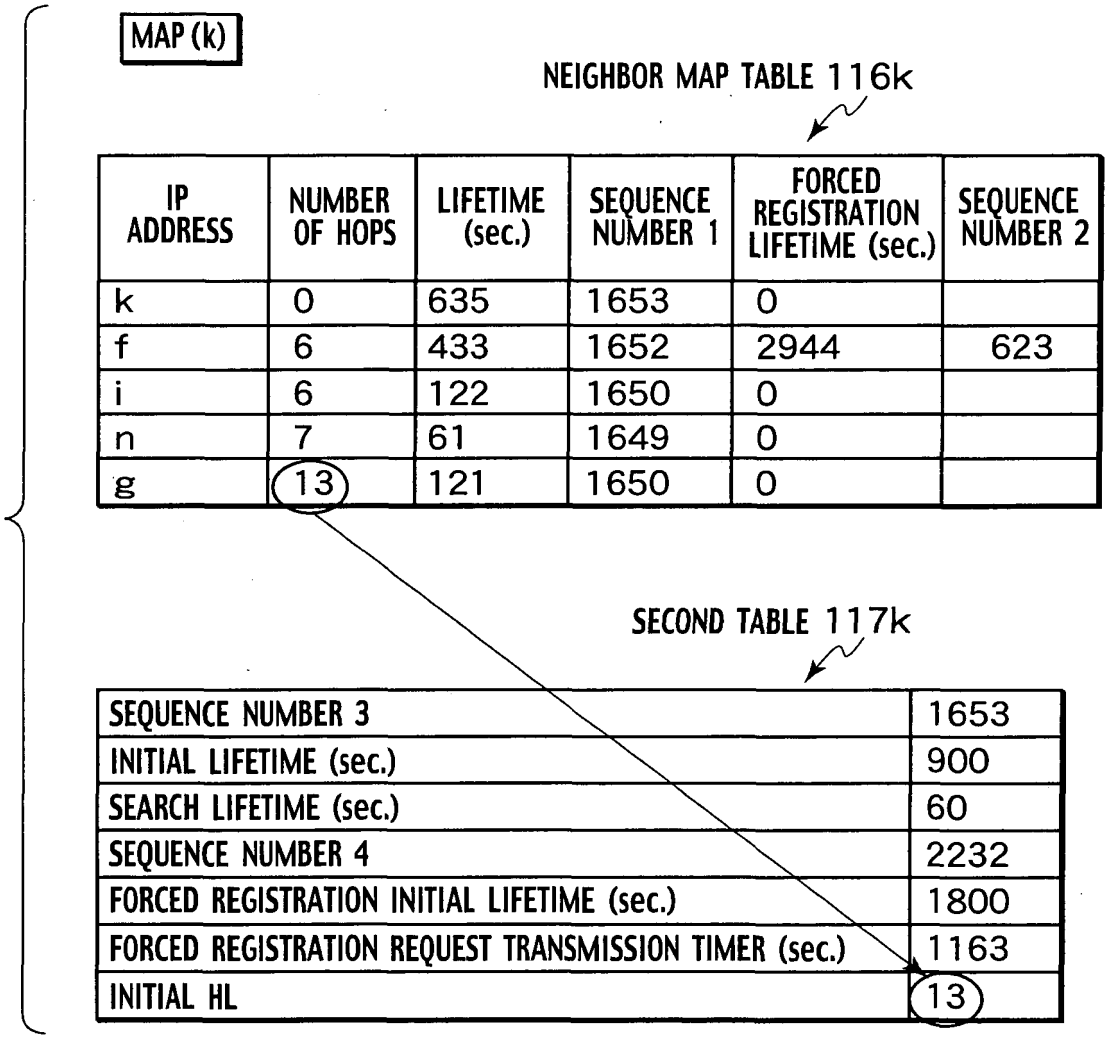

MAP (k)
NEIGHBOR MAP TABLE 116k
IP ADDRESS
NUMBER OF HOPS
LIFETIME (sec.)
SEQUENCE NUMBER 1
FORCED REGISTRATION LIFETIME (sec.)
SEQUENCE NUMBER 2
k 0 635 1653 0
f 6 433 1652 2944 623
i 6 122 1650 0
n 7 61 1649 0
g 13 121 1650 0
SECOND TABLE 117k
SEQUENCE NUMBER 3 1653
INITIAL LIFETIME (sec.) 900
SEARCH LIFETIME (sec.) 60
SEQUENCE NUMBER 4 2232
FORCED REGISTRATION INITIAL LIFETIME (sec.) 1800
FORCED REGISTRATION REQUEST TRANSMISSION TIMER (sec.) 1163
INITIAL HL 13

FIG. 21

MN (a)

NEIGHBOR MAP TABLE 126a

IP ADDRESS	NUMBER OF HOPS	LIFETIME (sec.)	SEQUENCE NUMBER 1
f	2	22	666
k	3	22	666
b	4	30	667
a	6	18	663
d	10	18	663

SECOND TABLE 127a

SEQUENCE NUMBER 3	667
INITIAL LIFETIME (sec.)	30
SEARCH LIFETIME (sec.)	15
INITIAL HL	255

FIG. 22

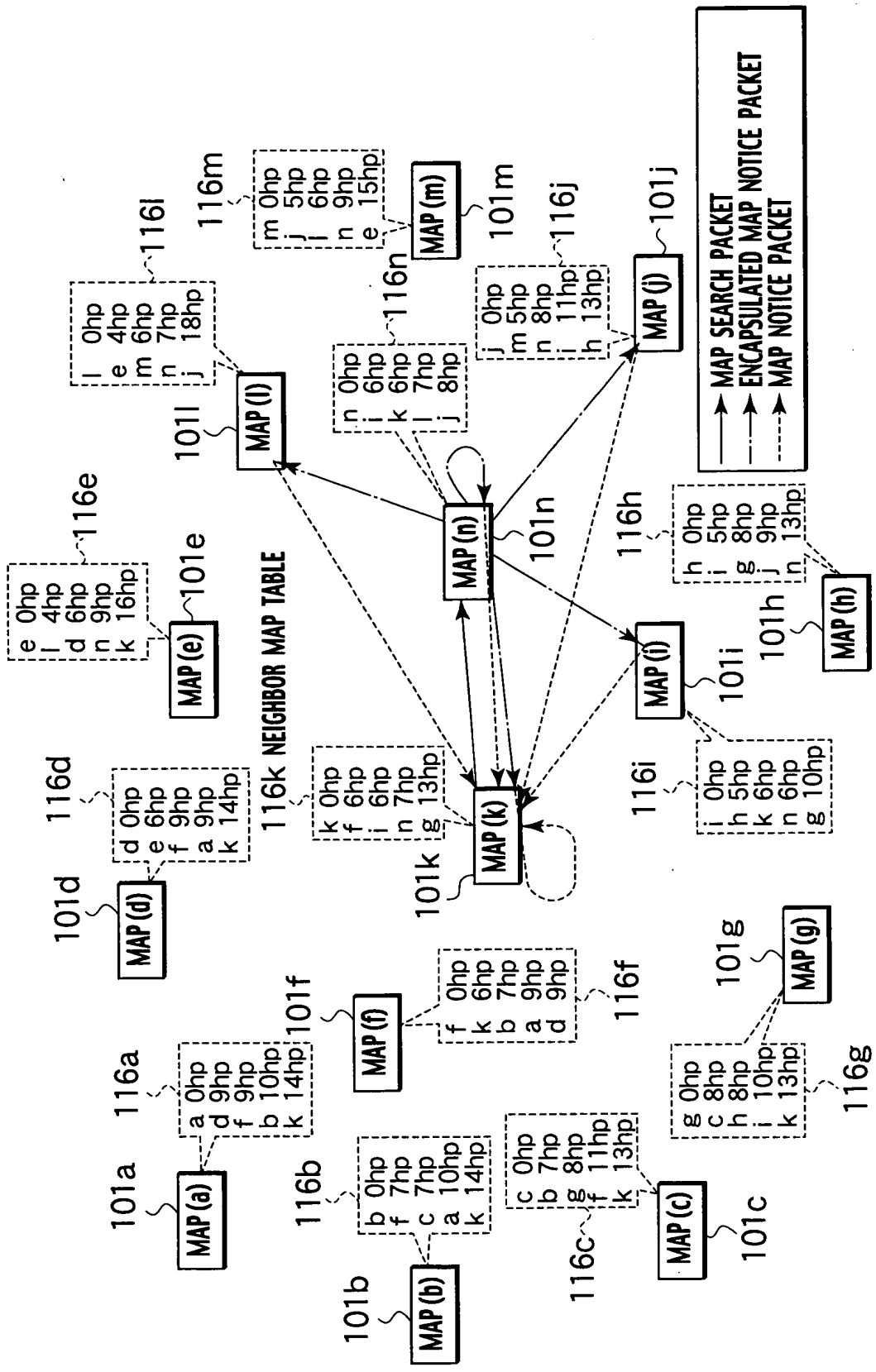

MAP SEARCH PACKET
ENCAPSULATED MAP NOTICE PACKET
MAP NOTICE PACKET
NEIGHBOR MAP TABLE
MAP(a)
MAP(b)
MAP(c)
MAP(d)
MAP(e)
MAP(f)
MAP(g)
MAP(h)
MAP(i)
MAP(j)
MAP(k)
MAP(l)
MAP(m)
MAP(n)
101a
101b
101c
101d
101e
101f
101g
101h
101i
101j
101k
101l
101m
101n
116a
116b
116c
116d
116e
116f
116g
116h
116i
116j
116k
116l
116m
116n
a 0hp
d 9hp
f 9hp
b 10hp
k 14hp
b 0hp
f 7hp
c 7hp
a 10hp
k 14hp
c 0hp
b 7hp
g 8hp
f 11hp
k 13hp
d 0hp
e 6hp
f 9hp
a 9hp
k 14hp
e 0hp
l 4hp
d 6hp
n 9hp
k 16hp
f 0hp
k 6hp
b 7hp
a 9hp
d 9hp
g 0hp
c 8hp
h 8hp
i 10hp
k 13hp
h 0hp
i 5hp
g 8hp
j 9hp
n 13hp
i 0hp
h 5hp
k 6hp
n 6hp
g 10hp
k 0hp
f 6hp
i 6hp
n 7hp
g 13hp
j 0hp
m 5hp
n 8hp
i 11hp
h 13hp
l 0hp
e 4hp
m 6hp
n 7hp
j 18hp
m 0hp
j 5hp
l 6hp
n 9hp
e 15hp
n 0hp
i 6hp
k 6hp
l 7hp
j 8hp

FIG. 23

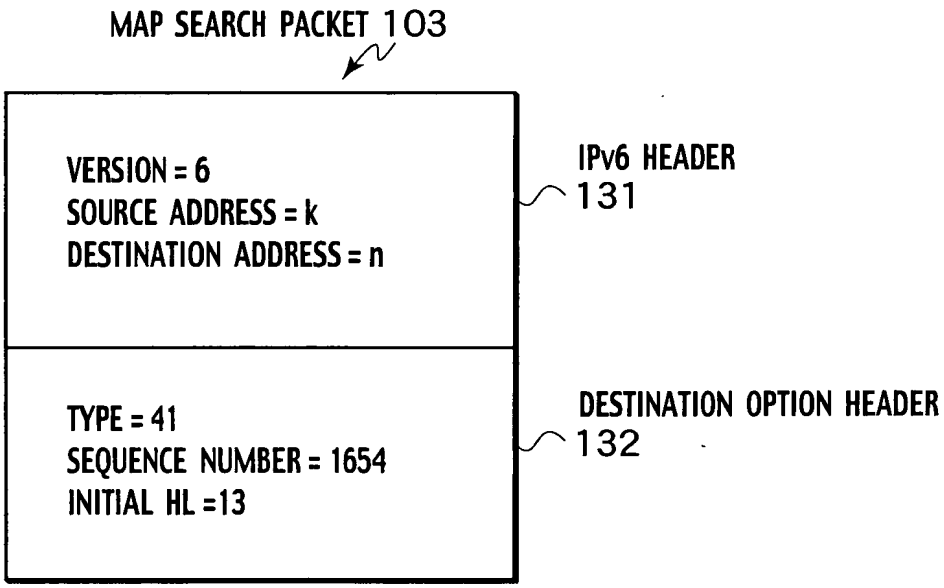

MAP SEARCH PACKET 103
VERSION = 6
SOURCE ADDRESS = k
DESTINATION ADDRESS = n
IPv6 HEADER
131
TYPE = 41
SEQUENCE NUMBER = 1654
INITIAL HL =13
DESTINATION OPTION HEADER
132

FIG. 24A

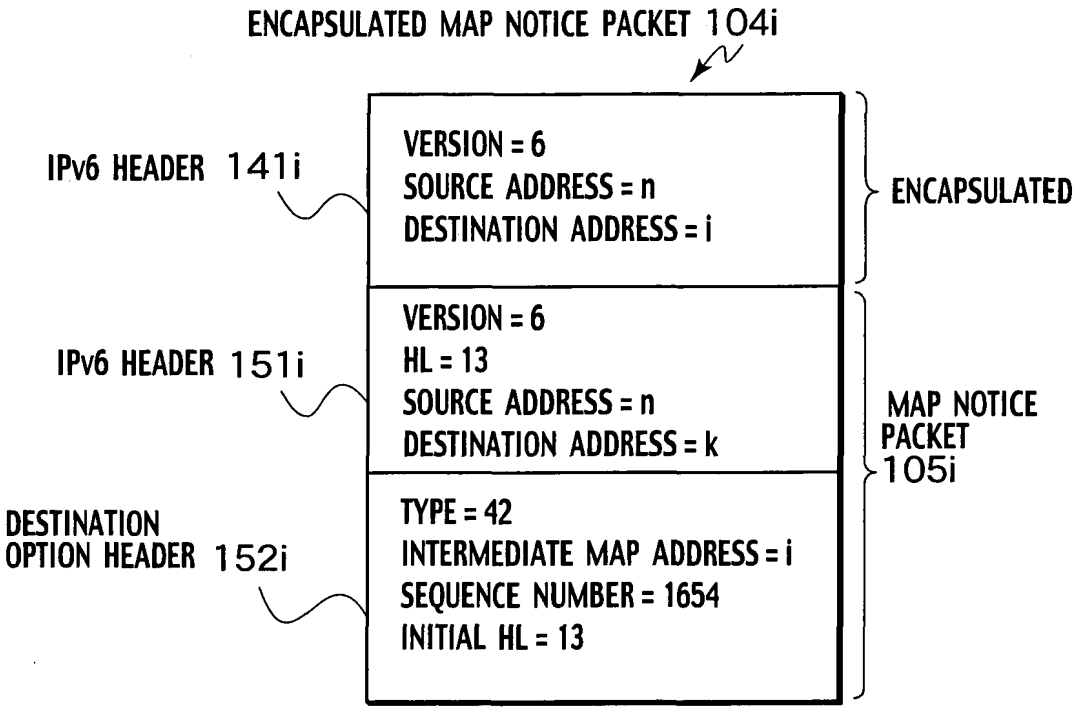


FIG. 24B

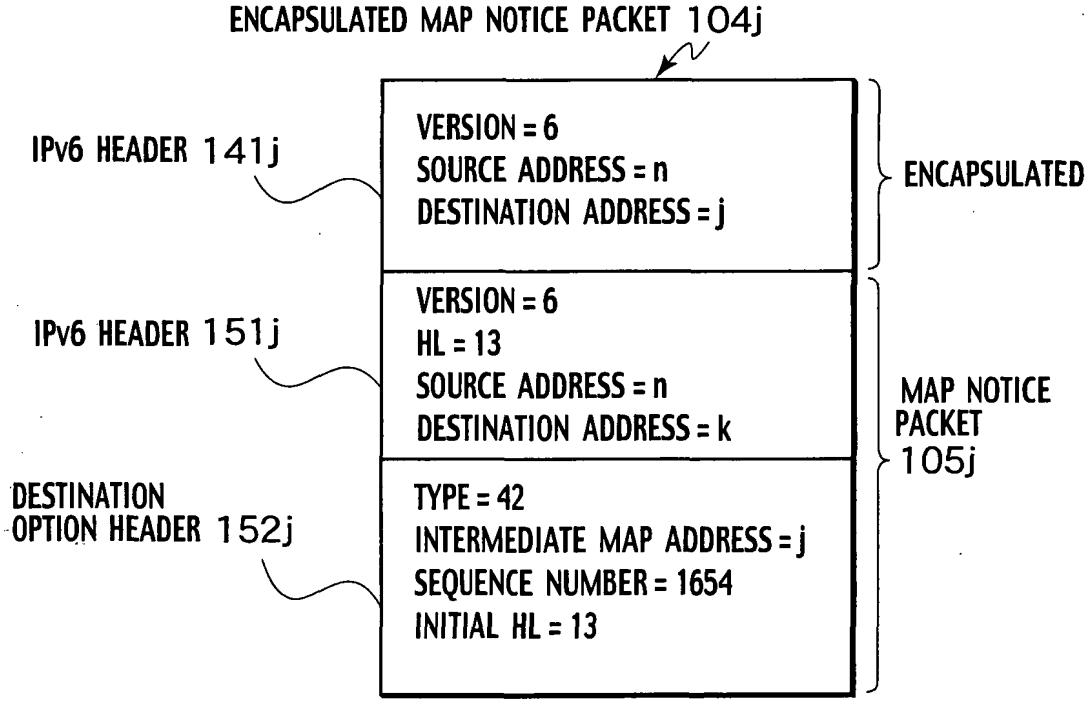


FIG. 25

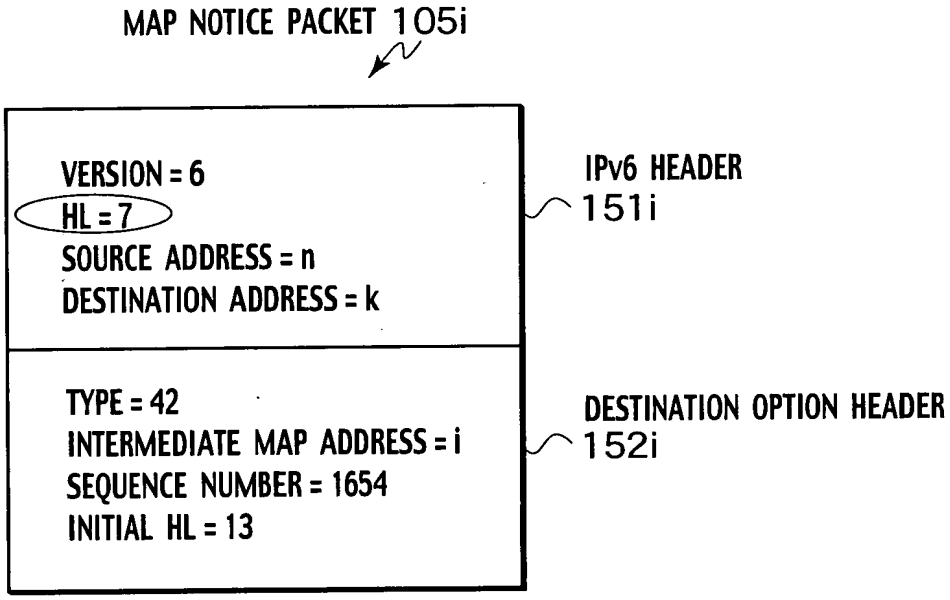

MAP NOTICE PACKET 105i
VERSION = 6
HL = 7
SOURCE ADDRESS = n
DESTINATION ADDRESS = k
IPv6 HEADER
151i
TYPE = 42
INTERMEDIATE MAP ADDRESS = i
SEQUENCE NUMBER = 1654
INITIAL HL = 13
DESTINATION OPTION HEADER
152i

FIG. 26

MAP (k)

NEIGHBOR MAP TABLE 116k

IP ADDRESS	NUMBER OF HOPS	LIFETIME (sec.)	SEQUENCE NUMBER 1	FORCED REGISTRATI ON LIFETIME (sec.)	SEQUENCE NUMBER 2
k	0	900	1654	0	
f	6	432	1652	2943	623
i	6	122	1650	0	
n	7	900	1654	0	
g	13	121	1650	0	

SECOND TABLE 117k

SEQUENCE NUMBER 3	1654
INITIAL LIFETIME (sec.)	900
SEARCH LIFETIME (sec.)	60
SEQUENCE NUMBER 4	2232
FORCED REGISTRATION INITIAL LIFETIME (sec.)	1800
FORCED REGISTRATION REQUEST TRANSMISSION TIMER (sec.)	1162
INITIAL HL	13

FIG. 27

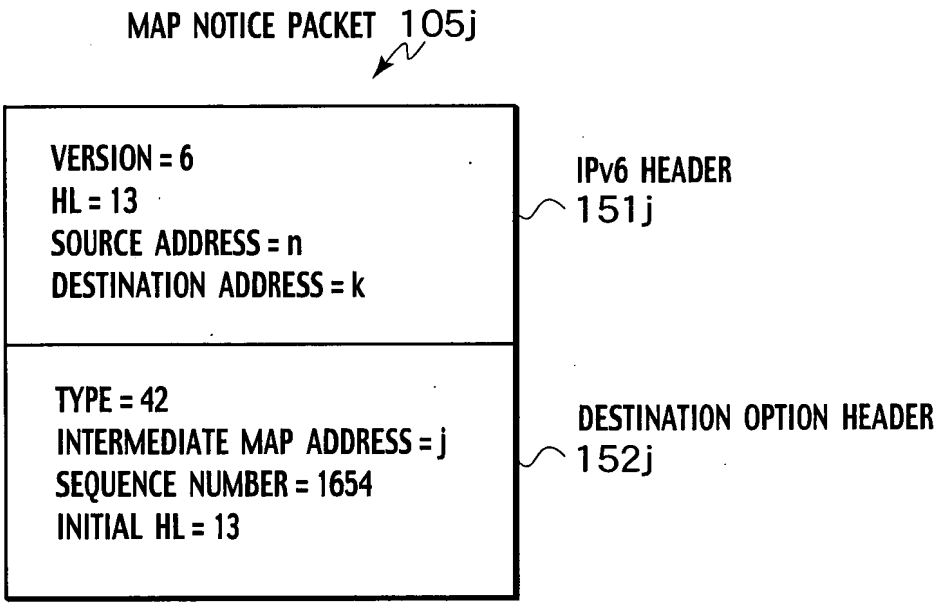

MAP NOTICE PACKET 105j
VERSION = 6
HL = 13
SOURCE ADDRESS = n
DESTINATION ADDRESS = k
IPv6 HEADER
151j
TYPE = 42
INTERMEDIATE MAP ADDRESS = j
SEQUENCE NUMBER = 1654
INITIAL HL = 13
DESTINATION OPTION HEADER
152j

FIG. 28

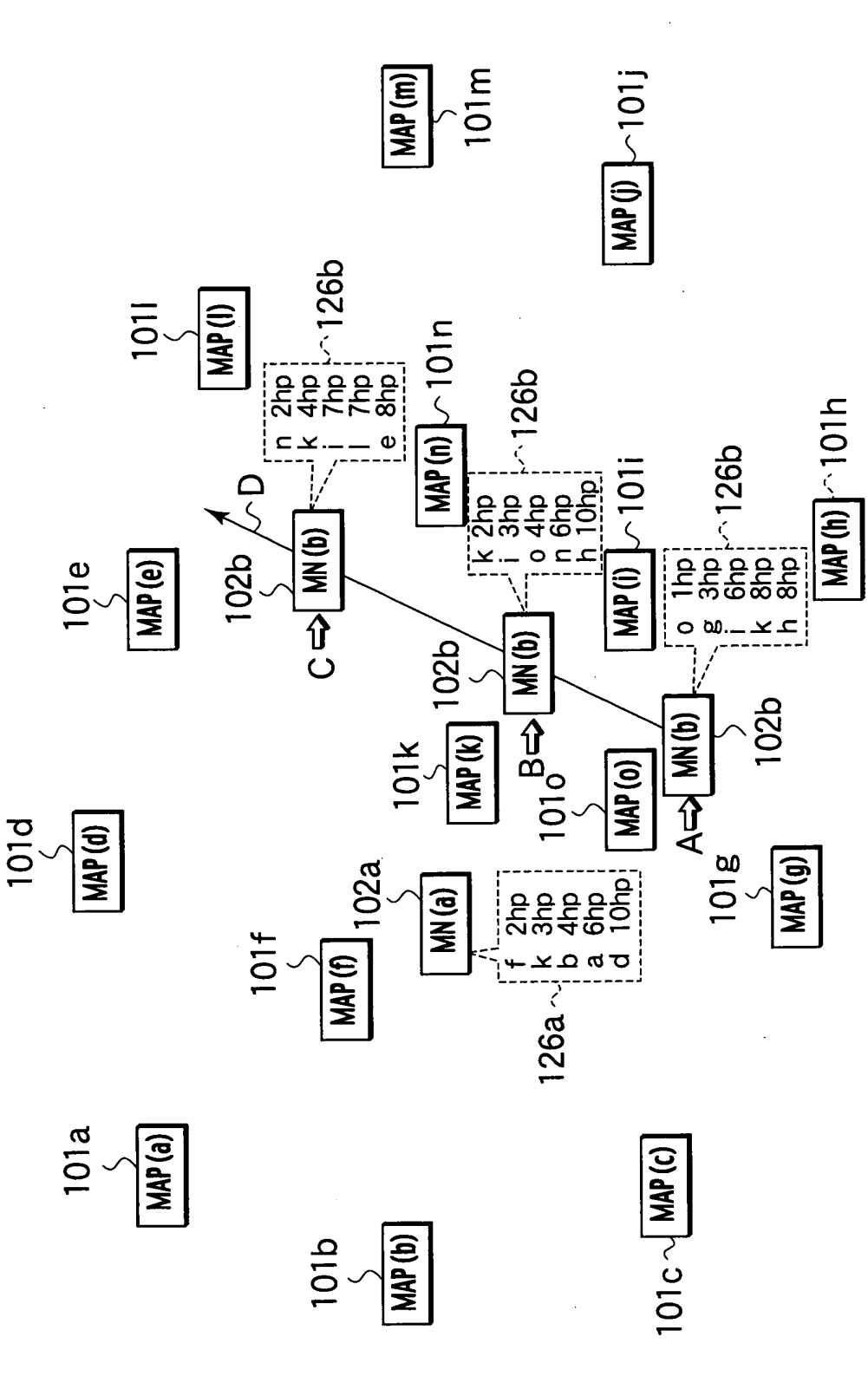

MAP(a)
101a
MAP(b)
101b
MAP(c)
101c
MAP(d)
101d
MAP(e)
101e
MAP(f)
101f
MAP(g)
101g
MAP(h)
101h
MAP(i)
101i
MAP(j)
101j
MAP(k)
101k
MAP(l)
101l
MAP(m)
101m
MAP(n)
101n
MAP(o)
101o
MN(a)
102a
MN(b)
102b
126a
f 2hp
k 3hp
b 4hp
a 6hp
d 10hp
126b
n 2hp
k 4hp
i 7hp
l 7hp
e 8hp
k 2hp
i 3hp
o 4hp
n 6hp
h 10hp
o 1hp
g 3hp
i 6hp
k 8hp
h 8hp
A
B
C
D

FIG.29

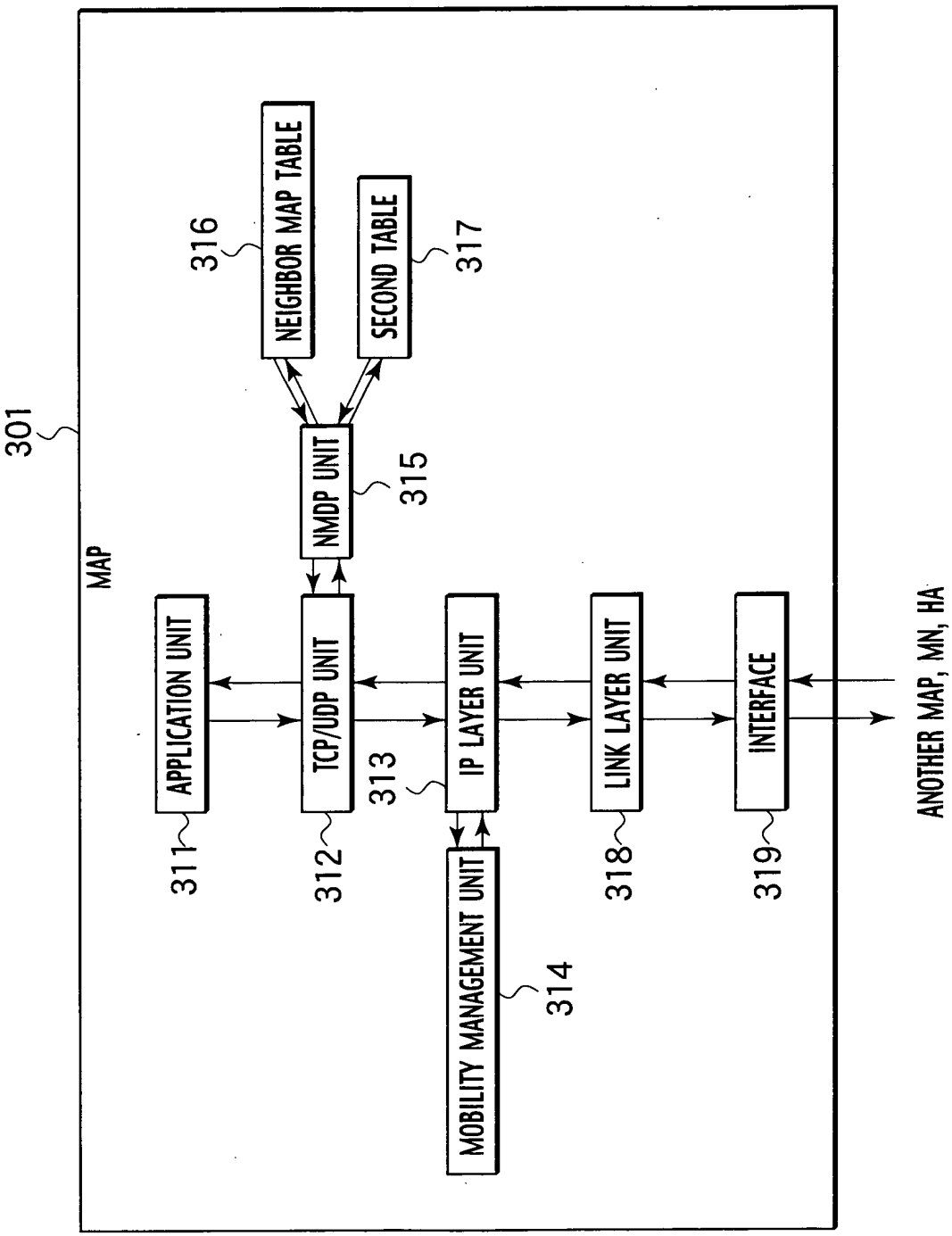
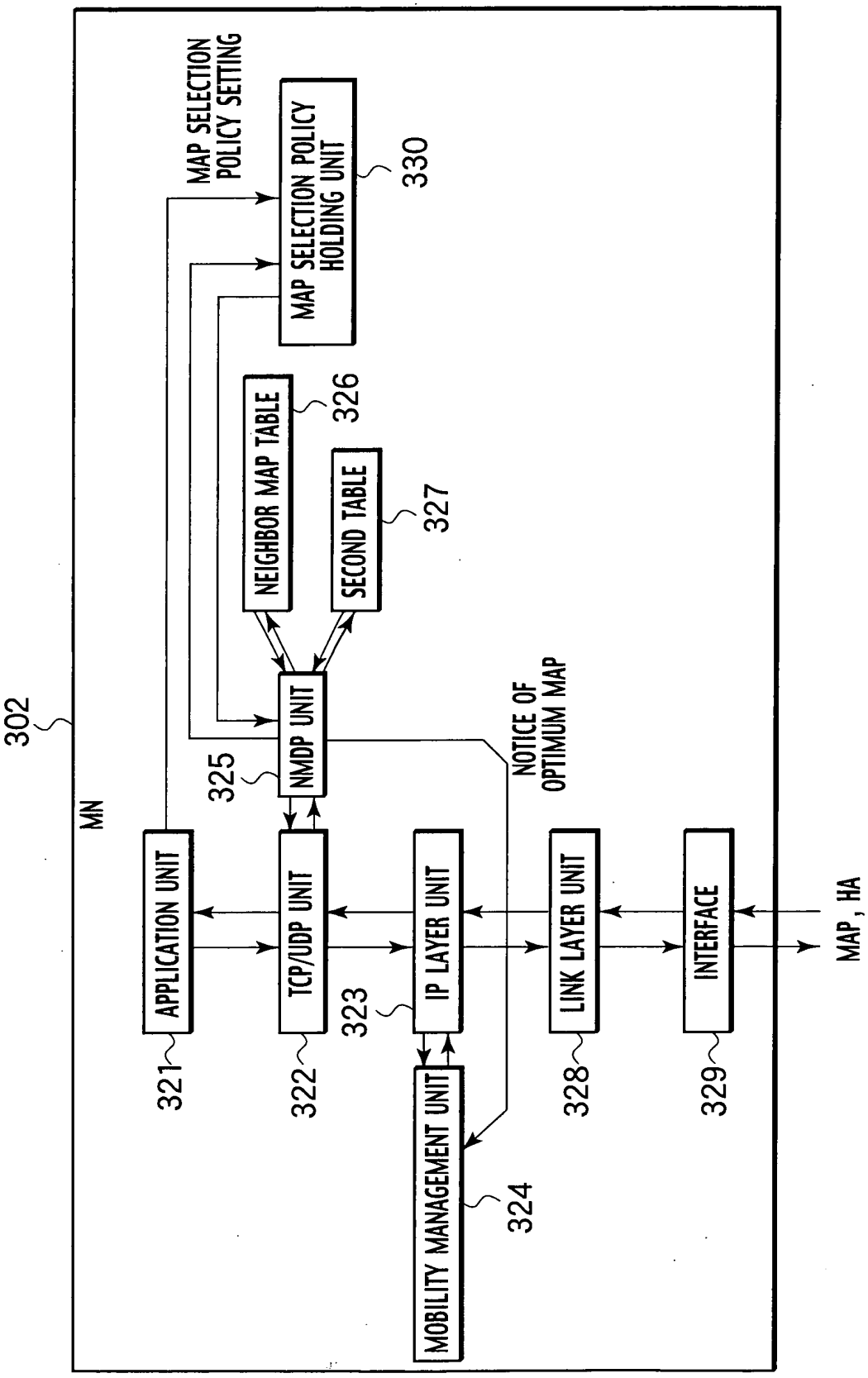

301
MAP
316
NEIGHBOR MAP TABLE
317
SECOND TABLE
315
NMDP UNIT
APPLICATION UNIT
TCP/UDP UNIT
313
IP LAYER UNIT
LINK LAYER UNIT
INTERFACE
ANOTHER MAP, MN, HA
311
312
318
319
MOBILITY MANAGEMENT UNIT
314

FIG.30


302
MN
MAP SELECTION POLICY SETTING
MAP SELECTION POLICY HOLDING UNIT
330
NEIGHBOR MAP TABLE
326
SECOND TABLE
327
NMDP UNIT
325
NOTICE OF OPTIMUM MAP
APPLICATION UNIT
TCP/UDP UNIT
IP LAYER UNIT
LINK LAYER UNIT
INTERFACE
MAP, HA
321
322
323
328
329
MOBILITY MANAGEMENT UNIT
324